

front side of the bar to correspond with 0. Now put a  $\frac{1}{2}$  inch block under the left foot of the level, and mark where the line settles, and  $\frac{1}{2}$  on the top of the bar; remove the  $\frac{1}{2}$  inch block, and put a 1 inch block under that foot, and mark where the line crosses the bar, and 1 on top of the bar; proceed in that manner until it is graduated to 6 inches. Repeat the same process for the right foot, and other side of the line on the bar, and the level will be graduated ready for work.

## SECTION XXL

## APPLICATION OF THE RAFTER LEVEL TO THE LEVEL CULTURE.

The manner of using the level is the same for both methods, with this difference: for the *Level Method* the rows are laid off, and plowed on a dead level, whilst for the *Grading Method*, a fall is given to the rows and drains.

It is necessary to be more accurate, and apply the level oftener for the level method, than for the grading method.

Before going to work, we must determine upon, first, the kind of crop to be cultivated; second, the character of the soil; third, the inclination of the land, whether comparatively level plains, undulating ridges or hills; and fourth, the method of horizontalizing desired.

To illustrate and explain the different methods, we will select a forty-five acre field, which we call the Gin-house field. Upon examining it, we find a plain, a hill, a ridge, a basin, a pond, and the balance undulating irregular surfaces, and wet flats and ditches. The soil is a grey, and dark sandy land, on a yellow and red clay subsoil, of medium quality, that has been much abused by bad plowing, and constant cropping. It presents a sufficient variety of soil, and undulations of surface, necessary to explain our subject.

It was horizontalized by me in 1851.

## SECTION XXII.

## TO HORIZONTAL A PLAIN BY THE EYE ON THE STRAIGHT ROW METHOD.

We will go to the field, with the level well graduated, accompanied by a small boy, who carries a bundle of canes or green sticks, some one foot, and some six feet long. A sensible plowman, with a quick, tractable mule, with a scooter or rooter plow, and a hill-side mould-board plow follows.

To try the skill of the plowman, and the temper and spirit of the mule, we select a plain on which the Gin-house stands, for operation. We suppose the field to be a stubble-field, having been always plowed up and down hill. Having determined upon the direction of the rows, and the points of departure and termination for them, we direct the plowman how to proceed, order him to set his stakes, "be sure you are right, and then go ahead,"